

Listing of claims:

1. (Currently Amended) A method for increasing the susceptibility of a cell to a DNA-damaging agent, comprising introducing into the cell *in vitro* an antisense nucleic acid that specifically hybridizes to a nucleic acid encoding a human DNA-dependent protein kinase subunit so as to prevent expression of the human DNA-dependent protein kinase subunit wherein (a) the antisense nucleic acid is in an amount sufficient to increase the sensitivity of the cell to heat, chemical, or radiation-induced DNA damage, (b) the antisense oligonucleotide is enclosed in a liposome prior to introduction into the cell and (c) the antisense nucleic acid has the sequence of a human Ku70 cDNA in the antisense orientation or a human Ku80 cDNA in the antisense orientation, and wherein the sensitivity of the cell to 1ug/ml adriamycin is increased by 3-5 fold or wherein the sensitivity of the cell to 6 Gy of γ -radiation is increased by approximately 5-fold.
- 2-26. (Canceled)
27. (New) The method of claim 1, wherein the antisense nucleic acid has the sequence of human Ku70 cDNA in the antisense orientation and wherein the sensitivity of the cell to 6 Gy of γ -radiation is increased by approximately 5-fold.
28. (New) The method of claim 1, wherein the antisense nucleic acid has the sequence of human Ku80 cDNA in the antisense orientation, and wherein the sensitivity of the cell to 1ug/ml adriamycin is increased by 3-5 fold.